

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A cytochrome C-reporter fusion protein construct comprising:

- (a) a modified cytochrome C protein ~~or any functional analogue thereof~~ derived from wild type cytochrome C represented by SEQ ID NO: 2; and
- (b) a fluorescent protein reporter,

wherein said fusion protein ~~modified cytochrome C~~ targets the mitochondria and has a reduced ability to induce apoptosis in a living cell, and

wherein said modified cytochrome C comprises the amino acid substitution selected from the group consisting of K73A, K73L, K73R, K73G and K73X, wherein X represents trimethylation.

Claim 2 (previously presented): The fusion construct of claim 1, wherein said modified cytochrome C binds apoptosis protease activation factor-1 (Apaf-1) at least ten times less than wild type cytochrome C.

Claim 3 (previously presented): The fusion construct of claim 1, wherein said modified cytochrome C binds apoptosis protease activation factor-1 (Apaf-1) at least 100 times less than wild type cytochrome C.

Claim 4 (previously presented): The fusion construct of claim 1, wherein said modified cytochrome C binds apoptosis protease activation factor-1 (Apaf-1) at least 1000 times less than wild type cytochrome C.

Claims 5-11 (cancelled)

Claim 12 (currently amended): The fusion construct of claim 1-~~claim 11~~, wherein said fluorescent protein is selected from the group consisting of Green Fluorescent Protein (GFP), Yellow Fluorescent Protein (YFP), Blue Fluorescent Protein (BFP), Cyan Fluorescent Protein (CFP), Red Fluorescent Protein (RFP), Enhanced Green Fluorescent Protein (EGFP) and Emerald.

Claim 13 (currently amended): The fusion construct of claim 1-~~claim 11~~, wherein said fluorescent protein is Enhanced Green Fluorescent Protein or Emerald.

Claim 14 (currently amended): The fusion construct of claim 12-~~claim 11~~, wherein said GFP comprises:

- i) an amino acid substitution at position F64L;

- ii) an amino acid substitution at position S175G; and
- iii) an amino acid substitution at position E222G.

Claim 15 (previously presented): The fusion construct of claim 1 selected from the group consisting of SEQ ID NO: 4 and SEQ ID NO: 6.

Claims 16-20 (cancelled)

Claim 21 (previously presented): A nucleotide sequence encoding the fusion construct of claim 1.

Claim 22 (previously presented): A nucleotide sequence selected from the group consisting of SEQ ID NO: 3 and SEQ ID NO 5.

Claim 23 (previously presented): A nucleic acid construct comprising a suitable control region and the nucleotide sequence of claim 21, said sequence being under the control of said control region.

Claim 24 (previously presented): The nucleic acid construct of claim 23 being under the control of a promoter selected from the group consisting of native cytochrome C promoter, mammalian constitutive promoter, mammalian regulatory promoter, human

ubiquitin C promoter, viral promoter, SV40 promoter, CMV promoter, yeast promoter, filamentous fungal promoter and bacterial promoter.

Claim 25 (previously presented): The nucleic acid construct of claim 24, wherein said viral promoter is the CMV or the SV40 promoter.

Claim 26 (previously presented): The nucleic acid construct of claim 24, wherein the promoter is the human ubiquitin C promoter.

Claim 27 (previously presented): A replicable vector comprising the nucleic acid construct of claim 23.

Claim 28 (original): The replicable vector of claim 27, wherein said vector is a plasmid vector.

Claim 29 (original): The replicable vector of claim 27, wherein the vector is a viral vector.

Claim 30 (original): The replicable vector of claim 29, wherein said viral vector is selected from the group consisting of cytomegalovirus, Herpes simplex virus, Epstein-Barr virus, Simian virus 40, Bovine papillomavirus, Adeno-associated virus, Adenovirus, Vaccinia virus and Baculovirus vector.

Claim 31 (previously presented): A host cell stably transformed with the nucleic acid construct of claim 23.

Claim 32 (previously presented): A host cell transiently transformed with the nucleic acid construct of claim 23.

Claim 33 (previously presented): The host cell of claim 31 selected from the group consisting of plant, insect, nematode, bird, fish and mammalian cell.

Claim 34 (original): The host cell of claim 33, wherein said mammalian cell is a human cell.

Claim 35 (original): The host cell of claim 34, wherein said human cell is selected from the group consisting of Hek, HeLa, U2OS and MCF-7.

Claim 36 (original): The host cell of claim 35, wherein said Hek cell is Hek293.

Claim 37 (previously presented): The host cell of claim 31 capable of expressing the fusion protein of claim 1.

Claim 38 (previously presented): A method for detecting apoptosis in a living cell comprising the steps of:

- i) culturing a cell transformed to over-express the fusion construct of claim 1; and
- ii) determining the localisation of the fusion construct within the cell with time;

wherein a change in localisation of the fusion construct within the cell is indicative of apoptosis.

Claims 39-42 (cancelled)

Claim 43 (withdrawn, currently amended): The method of claim 38~~claim 38-41~~, wherein the localisation of said fusion construct is measured by its luminescence, fluorescence or radioactive properties.

Claims 44-45 (cancelled)

Claim 46 (withdrawn, currently amended): The method of claim 38~~claim 38-41~~, wherein the localisation of the protein fusion is determined following fixation of the cells.

Claim 47 (withdrawn, currently amended): The method of claim 38~~claim 38-41~~, where the agent is a chemical, physical or biological agent.